

EXPRESS MAIL NO.: EL750740729US

Docket No. 00-063-DSK

**CLAIMS:**

What is claimed is:

- 1 1. A method for recovery of compromised instances of
- 2 virtual mapping systems, comprising the steps of:
- 3 identifying a plurality of physical data elements
- 4 for which mapping has been compromised;
- 5 determining whether anchor points exist for the
- 6 plurality of physical data elements;
- 7 processing anchor points to find data elements in
- 8 managed order if anchor points exist; and
- 9 launching processing for each element found.

1 2. The method of claim 1, wherein the managed order  
2 comprises data elements with sequential addresses.

1 3. The method of claim 1, wherein the managed order  
2 comprises data elements that are sorted by address.

1 4. The method of claim 1, wherein the managed order  
2 comprises data elements that are sorted by query  
3 frequency.

1 5. The method of claim 1, further comprising:  
2 finding data elements in physical space if anchor  
3 points do not exist.

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1 6. The method of claim 5, wherein the step of finding  
2 data elements in physical space comprises at least one of  
3 a sequential scan, random entry, and a binary search.

1 7. An apparatus for recovery of compromised instances  
2 of virtual mapping systems, comprising:

3 identification means for identifying a plurality of  
4 physical data elements for which mapping has been  
5 compromised;

determination means for determining whether anchor points exist for the plurality of physical data elements;

8 first processing means for processing anchor points  
9 to find data elements in managed order if anchor points  
10 exist; and

11 second processing means for processing each element  
12 found.

1 8. The apparatus of claim 7, wherein the managed order  
2 comprises data elements with sequential addresses.

1 9. The apparatus of claim 7, wherein the managed order  
2 comprises data elements that are sorted by address.

1 10. The apparatus of claim 7, wherein the managed order  
2 comprises data elements that are sorted by query  
3 frequency.

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- 1 11. The apparatus of claim 7, further comprising:
  - 2 means for finding data elements in physical space if
  - 3 anchor points do not exist.
  
- 1 12. The apparatus of claim 11, wherein the means for
- 2 finding data elements in physical space comprises at
- 3 least one of a sequential scan, random entry, and a
- 4 binary search.

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